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AMENDMENT

In the Claims:

10 Please substitute Claims 1, 5, and 10 presented below in marked-up form for previous Claims 1, 5, and 10. A complete listing of all claims is as follows.

1. **(currently amended)** A method of making a MOSFET, comprising:

first providing a substrate having a gate oxide and gate thereon, the gate defining a channel region of no more than 50 nm length;

15 second performing a source/drain extension implant;

third forming a spacer on the gate;

fourth performing epitaxy to form raised source/drain regions;

fifth forming a silicide on the gate and source/drain regions;

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20 sixth removing the spacer, thereby forming a void region between the source/drain regions and the gate;

seventh performing a halo implant through the void, thereby forming a halo around the gate in the channel region; and

eighth completing the MOSFET.

25 2. **(original)** A method as recited in claim 1, wherein the source/drain extension implant comprises an approximately vertical implant to a depth of approximately 10 nm to 30 nm of ions selected from the group consisting essentially of B⁺, BF₂⁺, As⁺, Sb⁺, P⁺.

30 3. **(original)** A method as recited in claim 1, wherein the spacer comprises a nitride.

35 4. **(original)** A method as recited in claim 1 wherein the halo implantation comprises an approximately vertical implant to a depth of approximately 40 nm to 100 nm of ions selected from the group consisting essentially of B⁺, BF₂⁺, Ga⁺, In⁺, As⁺, Sb⁺, P⁺.

5 5. **(currently amended)** A method of making a MOSFET, comprising:
 first providing a substrate having a gate oxide and gate thereon, the gate defining a
channel region of no more than 50 nm length;
 second performing a vertical source/drain extension implant to a depth of approximately
10 nm to approximately 30 nm;
10 thereafter, forming a spacer on the gate;
 forming raised source/drain regions;
 forming a silicide on the gate and source/drain regions;
 removing the spacer, thereby forming a void region through the silicide between the
source/drain regions and the gate;
15 performing a halo implant through the void, thereby forming a halo around the gate in the
channel region; and
 completing the MOSFET.

20 7. **(cancelled)**

 6. **(original)** A method as recited in claim 5, wherein the spacer comprises a nitride.

 8. **(original)** A method as recited in claim 5, wherein the source/drain regions are formed
by epitaxy.

25 9. **(original)** A method as recited in claim 5 wherein the halo implantation comprises an
approximately vertical implant to a depth of approximately 40 nm to 100 nm of ions selected
from the group consisting essentially of B^+ , BF_2^+ , Ga^+ , In^+ , As^+ , Sb^+ , P^+ .

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- 5 10. (**currently amended**) A method of making a MOSFET, comprising:
 providing a substrate having an isolation trench and a gate oxide and gate thereon, the
 gate defining a channel region of no more than 50 nm length;
 performing an approximately vertical source/drain extension implant in a region from the
 isolation trench to the gate, to a depth of approximately 10 nm to approximately 30 nm;
10 forming a nitride spacer on the gate;
 performing epitaxy to form raised source/drain regions;
could forming a silicide on the gate and source/drain regions;
 removing the spacer, thereby forming a void region through the silicide between the
 source/drain regions and the gate;
15 performing an approximately vertical halo implant to a depth of approximately 40 nm to
 approximately 100 nm, thereby forming a void region around the gate in the channel region; and
 completing the MOSFET.

- 20 11. (**original**) A method as recited in claim 10 wherein the halo implantation comprises
 implantation of ions selected from the group consisting essentially of B⁺, BF₂⁺, Ga⁺, In⁺, As⁺, Sb⁺,
 P⁺.
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